



Low-temperature unit ANL 143 TTK 8-60W-1-P

Electrical data

Supply voltage	400 V / 50 Hz / 3 Ph
Max. current draw	39 A
Power at rated load	21.5 kW
Minimum cable cross-section for 25 m feed	63 A CEE 5x10 mm ²

Refrigeration circuit

Refrigerant stage 1	R449A
Refrigerant stage 2	R23
Number of refrigeration circuits	2

Consumer circuit

Pump head	2,0 bar
Volume flow	4,0

Dimensions and weight

Length	3.000 mm
Width	1.240 mm
Height	2.350 mm
Weight	1.800 kg

Connections

Consumer	2x Flansch DN 32
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Sound pressure level

at 10 m	45 dB(A)
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Operating environment

Max. 35 °C Außentemperatur

Coolant

Methanol
Ethanol
Therminal D12
Fragoltherm F-12

Special equipment

Verbraucherpumpe: FU Regelung
Verdichter: FU Regelung
Touchpanel: TP 700-TIA V15.1
Fernwartung: UMTS-Router
Steuerung: Siemens SPS S7

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Table 1: Water-cooled at +38 °C inlet (e.g. glycol) tc = 48 °C

Brine temperature [°C]	Compressor stage 2 [°C]	Condenser stage 2 [°C]	Compressor stage 1 [°C]	Capacity control [%]	Cooling capacity [kW]	Electrical power [kW]	Current draw [A]	Heat output [kW]
-70	-75	-20	-25	100	4	7	10.1	11.1
-60	-65	-20	-25	100	8	11.3	16.3	19.2
-50	-55	-20	-25	100	9	13.7	19.8	22.4
-45	-	-	-	-	-	-	-	-
-40	-	-	-	-	-	-	-	-

Table 2: Water-cooled at +27 °C inlet (e.g. cooling tower) tc = 37 °C

Brine temperature [°C]	Compressor stage 2 [°C]	Condenser stage 2 [°C]	Compressor stage 1 [°C]	Capacity control [%]	Cooling capacity [kW]	Electrical power [kW]	Current draw [A]	Heat output [kW]
-70	-75	-20	-25	100	4	6.1	8.9	10.2
-60	-65	-20	-25	100	8	9.3	13.5	17.5
-50	-55	-20	-25	100	9	11.3	16.4	20.4
-45	-	-	-	-	-	-	-	-
-40	-45	-20	-25	100	10	13.3	19.3	23.4

Table 3: Water-cooled at +8 °C inlet (e.g. chiller) tc = 20 °C

Brine temperature [°C]	Compressor stage 2 [°C]	Condenser stage 2 [°C]	Compressor stage 1 [°C]	Capacity control [%]	Cooling capacity [kW]	Electrical power [kW]	Current draw [A]	Heat output [kW]
-70	-75	-20	-25	100	4	5.5	8	10.9
-60	-65	-20	-25	100	8	7.5	10.9	15.9
-50	-55	-20	-25	100	9	9	13.1	18.1
-45	-	-	-	-	-	-	-	-
-40	-45	-20	-25	100	10	10.5	15.2	20.7

The cooling capacity stated above is the net capacity at the evaporator. The heat input into the hydraulic system caused by external pumps and insulation losses must be taken into account.

** Rated operating point*